User's manual

Lapsejay VX v. 1.0.1

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About Lapsejay

Based on the largely tested technology of its audio counterpart Logjay, Lapsejay has been improved into a comprehensive non-stop audio and video logging software that fully takes advantage from today's PCs digital technology to store massive amounts of audio and video with fast access and retrieving features. You can finally get rid of those old time-lapse video recorders of questionable quality and reliaibility, and with high maintainance costs (you have to periodically check machines, other than purchasing and periodically replace tapes).

Lapsejay automatically stores and indexes recorded video by date and time. Lapsejay can be set to automatically rotate logged files to keep track of a desider number of days (according to your local regulations) and if you wish, can automatically erase older days to make room for the new ones.

Lapsejay offers an instant access to recorded video thanks to its exclusive indexing and locating system. Gone are the days of rewinding through miles of tapes for hours (or days) to locate the desired passage! With Lapsejay you just select desired date and time, and press play to view the exact passage.

Lapsejay has been carefully engineered on building blocks, so you may purchase just the needed channels and features and save money on your initial purchase; for example, you may initially purchase just 1 of the 10 available channels, and later upgrade to 2, 4, 8 or even 10 channels if needed. Likewise, you may add later various optional plug-ins, like scheduling, audio/video detector, or the "Pro Pack" which includes a bunch of handy features like Internet Time Synchronizer, SMS alarms, CD/DVD burning feature, and more.

Thanks to its powerful scheduling features, Lapsejay allows to automatically start and stop recording according to a preset schedule for each day of the week or by means of external triggering from a satellite receiver: this way, tasks like capturing satellite news feeds or activating recording just when needed are easily performed, saving valuable hard disk space.

It is possible to play the recorded video instantly on any workstation in your LAN: more than one copy of the player module can access to the same recordings across a local network, while recorder module simultaneously carries on recording. You don't need to stop recording if you wish to watch any previously recorded passage!

Lapsejay key features:

- Multichannel structure: up to 10 indipendent recording channels on the same video server.
- Automatically indexes recorded video by date and time
- Full customizable timestamp superimpose on logged video, both on the recording than on-the-fly while playing the logged video.
- Dedicated player module allows to play logged video from LAN, while recorder module simultaneously carries on recording.
- Scheduling features allow to manage recording according to your schedule or by means of external triggering.
- Internet Time synchronizer: keeps your system clock always updated via your internet connection.
- Multiple frame capture feature allows capturing JPG frame-shots to disk while recording or while playing previous recordings.
- Built-in file purge feature removes older recordings to make space for the new ones.
- Allows choosing recording quality depending on your needs and available hard disk space indipendently for each of the 8 channels: audio and video codecs, frame per second, audio sampling frequency, image size, etc.
- Protects access to software settings with supervisor password.
- Works with consumer grade hardware components.
- Multilanguage software.

Lapsejay: more power and more feature at a fraction of the cost of a conventional tape-based jogging system!

Quickstart

Here is a short summary of basic operations for speeding up Lapsejay initial setup. For further details we strongly suggest you to carefully read the user's manual!

The software is bundled with a dongle which constitues your software licence and allows the software to run. This way, you are not bound to software unlock codes, instead, performing hardware upgrades or moving your software licence on another workstation is as simple as moving the dongle to your new PC.

Installing your customized USB dongle: Before you insert the key, run the "install_usb" batch file found in the "drivers\smartkey3" folder of your setup CD. Then, insert the USB dongle in one of the available USB ports. If Windows is running, the dongle is automatically recognized and you'll be asked for the driver path. Select the "install driver automatically" option, then follow the on-screen instruction which will guide you until the end of the setup.

Recording workstation:

1. Insert the installation CD in your CD-ROM drive.
2. To run Lapsejay setup procedure, open Windows Expoler and double click on the setup.exe file found in the "lapsejay" folder.
3. Follow the on-screen guided instructions which will guide you for the rest of the setup process.
4. Copy the wjlogo.bmp file from the main folder of your installation CD to Winjay installation folder (usually c:\program files\lapsejay if you choose the default one). This file is your station logo which is needed for software customization.
5. Click on "Start", "Lapsejay", "Lapsejay recording module" to run Lapsejay, the main window should appear in a matter of seconds.
6. To perform software settings, please read chapter 1 on this same manual: Lapsejay settings".

Networked player workstations:

Follow items 1-5 for the recording workstation setup, then:

1. Start Lapsejay Player, then open its setup window: you'll have to edit the database path where the player module should search for informations concerning the logged audio: just browse for the path to the database on the recording workstation (for example \\logger\c\program files\lapsejay).
2. When setting the storage path in the recording module, change any local path with the corresponding network path (for example \\LOGGER\C instead of C:\).
3. Remember to share drives on the recording workstation with full read/write access!

Chapter 1: The recording module

Here is a screen shot of Lapsejay recording module, which performs audio/video logging and signal monitor features. This is the main window, which appears when the recording module is started; on the top of the window, a panel with 4 or 8 mini-screens show a miniature of as many corresponding recording channels, in the middle, the software can be configured to show up to a couple of detail panels, complete full-size video preview, audio VU-meters, audio spectrum analyzer, motion-detector meter, and other details. Of course, details may slightly differ depending on your setup and/or enabled channel and features. For example, in the following window, Lapsejay has been setup to show a 4-chhanel synthesis upper panel, and 1 detail panel containing full details of the first channel being logged.

It is possible to freely move the video preview windows on your desktop: just drag and drop the preview window in your favourite position on the Windows desktop. Window position is automatically stored so that the next time the software is starter, the window itself will be shown in the same position.

In the following example, Lapsejay has been configured to show 1 synthesis panel on the top with 4 mini-screens, and no detail panel. Preview windows with the input video being logged have been freely positioned on Windows desktop.

Detailed description:

Record buttons

Click the Record button corresponding to the desired channel to manually start recording.

Stop buttons

Click the Stop button corresponding to the desired channel to manually stop recording.

Preview buttons

Press the Preview button corresponding to the desired channel to preview the incoming audio/video signal.

Frame capture buttons

Press the button to capture the current frame on Hard Disk as BMP or JPG picture, depending on settings made in the software setup window.

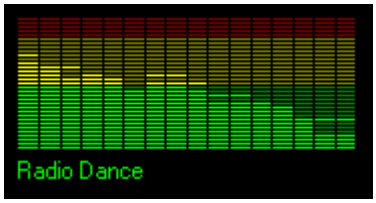
Setup button

Shows the setup window, which allows to set Lapsejay operating defaults and scheduling options. All channels must be in stop mode, otherwise the window will not be opened.

Exit button

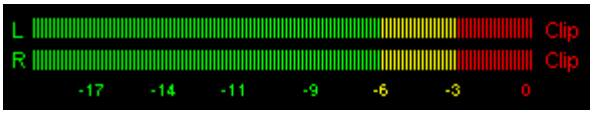
Terminates program execution. You'll see a dialog box asking for confirmation.

- **Spectrum analyzer**



For each recording channel, the spectrum analyzers show in real-time the spectrum of the input audio (audio level at different frequencies depending on recording sampling rate). Left-clicking on the analyzer, the exact frequency corresponding to each bar will be shown. The analyzer also features a peak-hold feature: the peak level segments are temporarily left visible before resetting themselves. When recording in stereo, the signal shown is the sum of Left + Right channels.

- **VU-meter**



For each recording channel, VU-meters show in real-time the input audio level. Signal is represented as peak level in dBs, where the 0 dB is the absolute maximum before a clipping occurs: in this latter case the “Clip” indicators on the right of each bar will lit. The VU-meters also include a peak-hold feature: the peak level segments are temporarily left visible before resetting themselves. When recording in stereo, the upper meter shows level for Left channel, the lower one the level for the Right channel.

- **Audio monitoring**

When using a multichannel capture card for audio recording, usually it is not possible to pass the audio signal from Line-in to Line-out directly, Instead, Lapsejay allows to render the sampled audio on the PC’s sound card for each of the incoming channels.

Disables audio monitor for that channel

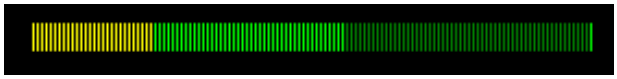
Enables audio monitor for that channel

- **Audio LED**

Shows the status of the audio detector:

- Green LED: everything is OK, the incoming audio level is over the minimum user-set threshold.
- Yellow LED: the incoming audio level is below the minimum threshold, if recording is already paused, it will stay paused until the audio level rises again over the threshold, if recording is running, recording goes for the duration of the delay time set and then stops, unless in the meantime the incoming audio raises again over the threshold.

- **Motion detector meter**



The motion detector meter shows in real-time the absolute motion of the incoming video signal. A low value indicates an incoming video which is more or less still (for example a “NO SIGNAL” blue screen from a satellite receiver), an high value a regular lively video feed. The meter also includes a peak-hold feature: the peak level segments are temporarily left visible before resetting themselves.

- **Video LED**

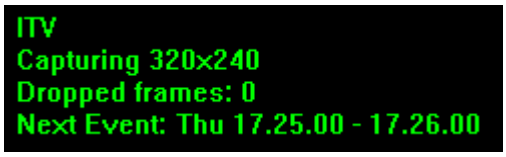
Shows the status of the video motion detector:

- Green LED: everything is OK, the absolute motion of the incoming video is over the minimum user-set threshold. If recording is in stop status, recording will be started.
- Yellow LED: the absolute motion of the incoming video is below the minimum threshold, if recording is already paused, it will stay paused until the video level rises again over the threshold, if recording is running, recording goes for the duration of the delay time set and then stops, unless in the meantime the motion of the incoming video raises again over the threshold.

- **File elapsed time**

Shows in minutes:seconds.tenths the length of the video segment being logged. The counter is updated in real-time.

- **Status display**



Below the VU-meters, this panel reports the following informations: user-set channel denomination, current software status (Stop, recording, preview, etc.), frames lost during recording, next scheduled event. If you note that the number of lost frames raises quickly, it means that CPU power is not adeguate comparing to your recording settings: replace your CPU with a faster one, or reduce frames per second and video size in order to minimize CPU load.

- **Date and time display**

Shows current date and time.

- **Your corporate logo**

This is your company logo which is used to customize your licence of Lapsejay.

- **Controls for channels 3 to 10**

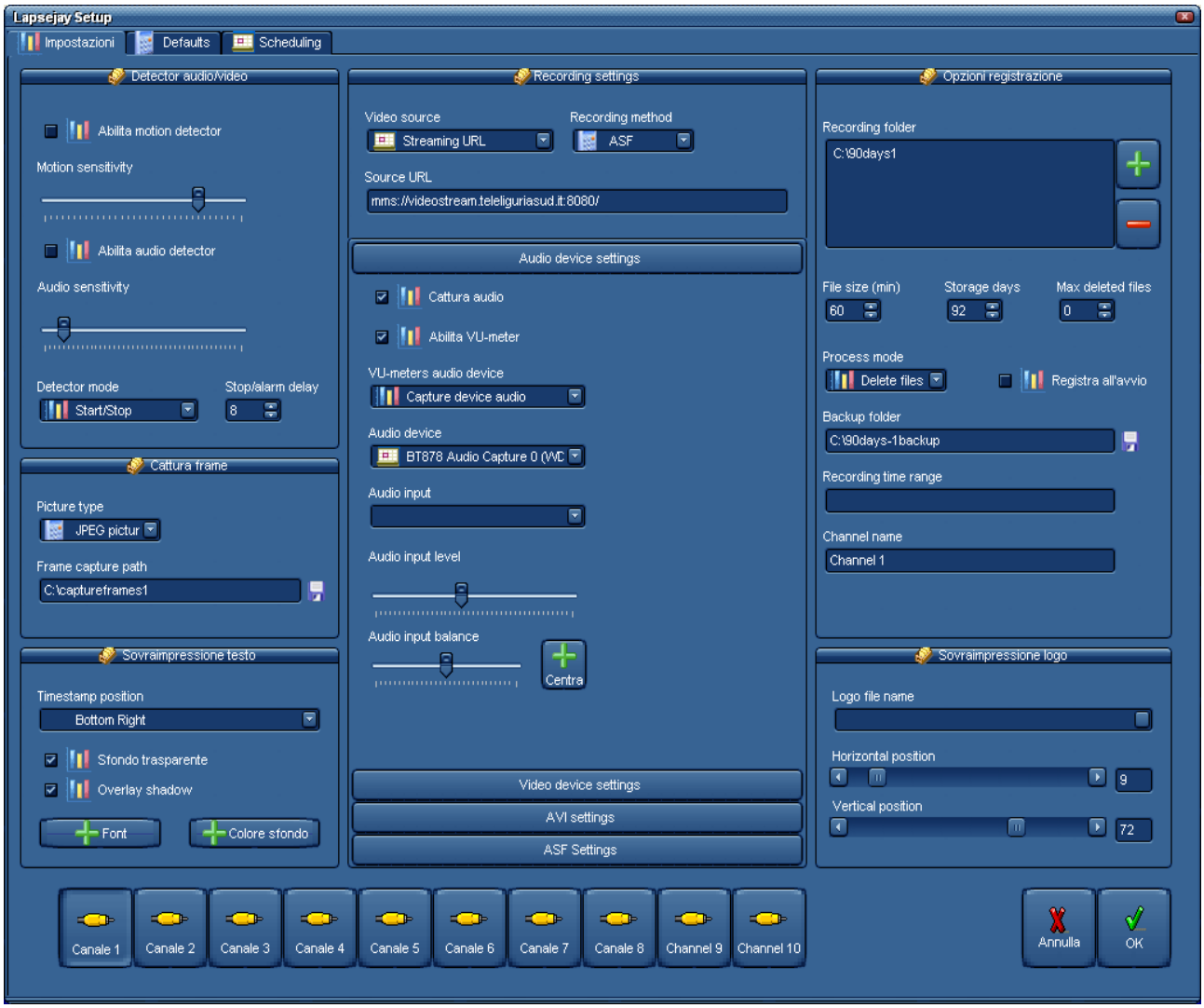
Controls for the second group of 8 recording channels (from 3 to 10) are grouped into the upper part of the screen as in the following detail:

Chapter: Lapsejay configuration

Press the setup button from the main Lapsejay screen to enter the setup window shown below. As always, details may slightly differ depending on your setup and on purchased plug-ins and selected skin.

For each of the available channels, a bunch of operating switches may be set according to your specific requirements.

Though full setup of configuration is allowed, settings related to features not included in your purchased package will not be working.



Detailed description :

Audio/video detector section

Lapsejay features an audio/video motion detector allowing to start and stop recording depending on the incoming audio level and image motion. This turn very useful when the software is used to video surveillance purposes, so you can capture only what and when needed. It is possible to check only the video, only the audio, or both of them: in this latter case, recording is started only when both audio and video are valid.

- **Enable motion detector checkbox**

If checked, the incoming video motion is checked in order to start and stop recording.

- **Motion detector threshold**

The cursor sets the threshold value for the video motion detector: values under the threshold are considered as invalid (i.e. still image), values above as valid ones (lively image).

- **Audio detector checkbox**

If checked, the incoming audio level is checked in order to start and stop recording.

- **Audio detector threshold**

The cursor sets the threshold value for the incoming audio level: values under the threshold are considered as invalid (silence), values above as valid ones.

- **Stop delay**

Sets the delay time (in seconds) for the audio and video detectors: when the time expires, audio and video are not valid, recording is stopped.

Frame capture section

Lapsejay includes a powerful frame capture feature on the incoming signal being logged. The player module allows to perform the same capture feature from video segments already logged on disk.

- **Picture type**

Sets the format to use for captured frames: JPG or Windows Bitmap (BMP).

- **Capture Path**

Sets the path where the captured frames will be saved. Pictures are saved to disk according to the date-hour format and with the extension corresponding to picture type (JPG or BMP), for example 20041230-223508.bmp means a BMP picture captured on 30/12/2004 at 22.35.08.

Timestamp overlay section

- **Timestamp position**

Lapsejay allows to automatically overlay to logged video the date and time which are updated in realtime while recording. This box allows to set the timestamp position on the video window. If you wish to disable this feature, set the “disabled” option: it is also possible to record clean without overlays, and superimpose the timestamp while playing the logged video with the Lapsejay Player module.

- **Transparent background checkbox**

If checked, the timestamp is overlayed without any background. Otherwise, the colour set with the “background color” button will be used.

- **Overlay shadow checkbox**

If checked, the time stamp will be painted with a slightly dark edge in order to improve readability.

- **Font button**

Opens the font settings window, to set font, color and font size for timestamp overlay.

- **Background color button**

Opens a dialog window to set the color to use for the timestamp background.

Recording settings

- **Video source**

- Video capture device: the video signal is captured from the selected video capture card.
- Screen recording: the video signal is a real-time capture of Windows screen. This mode turns useful to record presentations, etc.
- Streaming URL: the video signal is captured from a URL. Select this mode if yo uwish to log a Web TV which is straming live.

- **Recording format**

- AVI: clips are captured in AVI format, using the audio/video codec set in the related section “AVI settings”
- ASF: clips are captured in ASF format, using the recording profile set in the related section “ASF settings”

- **Source URL**

If the video source is set on Streaming URL, here you must specify the Internet address where the signal is streamed from.

Audio device settings

- **Capture Audio checkbox**

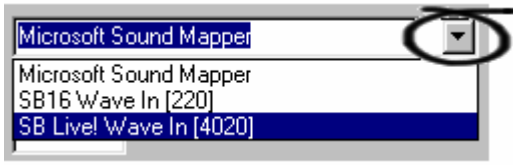
If checked, Lapsejay also captures incoming audio signal from the user-set sound card. Otherwise, video recording will be without any audio track.

- **Enable VU-meters checkbox**

If checked, enables the audio spectrum analyzer and VU-meters. Should you notice any sound card sharing issues (“device already in use” messages or similar), then you may disable this feature.

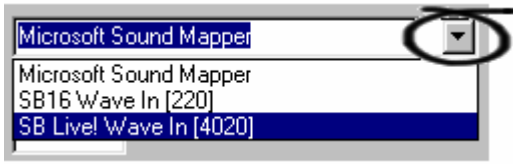
- **VU-meters audio device**

Select here the sound card to use for VU-meters among the available ones. It should usually match the audio capture card set in the box below.



- **Audio device**

Select here the sound card to use for audio capture among the available ones.



- **Audio input**

Allows to select the desired input channel from the audio capture sound card mixer, for example “Line In”.

- **Audio input level**

Sets the audio input level depending on your incoming audio signal. Once you set the cursor, try to perform a short capture in order to check your settings. If needed, perform you adjustments and try again until you get your desired results.

- **Audio balance**

Sets the audio input balance, for example, if you just need to capture the Left or the Right channels. Usually, you may leave the cursor in the center position.

- **Center button**

Use the Center button to quickly set the input audio balance to center.

Video device settings

- **Video standard**

Sets the video standard to use for video capture, for example PAL or NTSC.

- **Video input**

Sets the capture card video input to use for the incoming signal (for example Composite or S/Video).

- **TV channel**

If the capture card installed features a terrestrial analog TV tuner, it is possibile to capture directly from a TV aerial. You have to set the video input on “TV Tuner” and set here the channel to tune in. Note: this feature depends on the channel assignment and may no work for all countries.

- **Video device**

Sets the video capture card to use for the current channel. Just select the right one from the drop-down box.

- **Video size**

Sets the captured video size. Values around 320x240 pixels have proved appropriate for jogging purposes. Higher values guarantee better image definition but need more CPU power and more Hard Disk space.

- **Video subtype**

If needed, sets the video subtype for capturing. In most cases, the default option will work is fine.

- **Frames per second**

Sets the number of frames per second to capture. Any value from 1 to 25 (or 30, depending on the video standard in use) is allowed.

AVI settings

- **Audio format**

Allows to set the audio sampling frequency / bits to use for audio capture, for example 8000 Hz 16 Bit.

- **Audio compressor**

Allows to set audio codec for audio compression. Click the button on the right of the box, select your desired codec, and press OK to continue.
In order to get the best quality/compression ratio, we suggest to use the Windows Media Audio codec, just be careful not to use 8 bit formats, which are not supported.

- **Video compression**

Sets the codec to use for video compression, for example xVid or DivX. The two buttons below allow to manage the codec specific settings (bitrate, etc.).

ASF settings

- **Streaming mode**

Sets streaming mode:
- Disabled: audio/video captured on the current channels is not streamed
- Direct network streaming: the current channel is streamed directly to the Internet
- Stream to VM publishing point: to save on CPU load and bandwidth on your Internet connection, especially should you plan more concurrent users connected, select this option to stream to a Windows Media Server Publishing Point hosted by an Internet streaming service provider, to which users will connect to in order to receive your broadcast.

- **Max users**

Sets the maximum number of users that may simultaneously connect to your streaming service (should you stream directly to the Internet)

- **Publishing URL**

If the streaming mode is set to VM publishing point, sets the Windows Media Server address used as streaming publishing point.

- **Publishing username - publishing password**

If the streaming mode is set to VM publishing point, sets username and password to access to the Windows Media Server used as streaming publishing point.

- **Record in native format**

If checked, if the capture source is set to Streaming URL and the capture format is set to ASF, recording will be done in native format, i.e. incoming streaming will be captured to disk as-is, without any audio/video recompression.

- **ASF profiles**

Sets the ASF profile to use for audio/video compression.

Recording options settings

- **Storage folders**

It is possible to set one or more folders which will be used in sequence for the storage of captured video: when the available space on the first folder is over, Lapsejay will automatically switch to the next folder in the list, and so on. To add a new folder to the list, press the button with the + icon, select a local or network folder, then press OK to confirm. To delete a folder from the list, highlight the folder and press the button with the - icon.

- **File size box**

Sets the file size in minutes for each logged segment. Taking into account that you may not play a file until recording ends (or you stop recording manually), and that there's a small time gap between closing a file and starting the next one, this is clearly a compromise between file size and time you'll have to wait before it is possible to play the logged segment. Except for specific circumstances, we usually suggest a value of 60 minutes (1 hour) for each file.

- **Days to store**

Lapsejay can be set to automatically rotate logged files to keep track of a desired number of days and if you wish, can automatically erase older days to make room for the new ones. Type here how many days you wish to store before the oldest day of recording is erased to make room for the new ones (usually 90, 30, 42, depending on your local regulations or your requirements).

- **Max deleted files**

Here you may set the maximum number of video segments to delete each time the purge routine is fired. Taking into account that Lapsejay runs an obsolete recordings purge each hour, and supposing segments of 1 hour each, you should set this value to 1 (i.e. each hour, Lapsejay deletes not more than 1 segment). Thus, if the system clock is accidentally moved forward, deletion of huge quantities of video segments which should be kept into the archive is avoided. To disable this feature, set the value to 0.

- **Process mode**

For obsolete clips whose date is older than maximum days to store, sets action to execute:
- Delete files: clips are deleted to create space for the new ones
- Move files: clips are moved to a backup folder

- **Backup folder**

If the storage management mode is set to "move files", browse your hard disk to specify here the folder where obsolete clips will be archived, once maximum on-line days to are expired.

- **Recording time range**

If you don't need to run video jogging 24 hours a day, here you may specify a time range where recording will be automatically started. Outside this interval, recording is automatically stopped. For example, the string 09.30.00-10.15.00 enables recording from 9,30 to 10,15. To disable this feature, just clear this box.

- **Channel name**

Sets the input channel name, which is shown on the main recording window to identify the channel.

- **Record at startup**

If checked, recording is started automatically at Lapsejay startup. Otherwise, once Lapsejay is started, you'll have press the record button to start recording manually. Except for specific circumstances, we usually suggest to enable the autostart feature, so recording will be restart automatically at each startup (for example, after a power failure has occurred).

Logo overlay section

- **Logo filename**

Lapsejay allows to overlay a static pitture to the logged video. Use this box to browse your Hard Disk and select the filename with the BMP picture to overlay. To disable this feature, just clear the contents of the box.

- **Logo position**

These cursors allow to position the logo on the video window. Values in the boxes just right of the cursors show the absolute position in pixels.

- **Channel 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 buttons**

Select the channel on which you are doing software settings (settings are separate for each channel).

- **Cancel button**

Cancels updates and closes the setup window. You'll see a dialog box asking for confirmation.

- **OK button**

Confirms updates and closes the setup window.

Time Synchronizer section

Lapsejay features a built-in time synchronizer which allows to keep your system clock always updated thanks to time servers on the Internet. An “always-on” connection to the Internet is required, Lapsejay will not attempt to make a connection itself (you may share your Internet connection on your LAN, for example).

- **Time Server**

Here, you’ll have to specify the time server to use. Just select your server from the drop-down box.

- **UTC difference**

Time servers on the Internet always work on the UTC time, so here you’ll have to specify the time shift between UTC and your local time.

- **Get Time Now**

Press the button to attempt a connection to the specified time server: if this is successfull, in a matter of seconds the system time will be automatically updated according to the server time.

Various section

- **Language**

Lapsejay is multilinguage and any caption used in the software is read from a text file you can easily tailor to your needs, or copy-and-paste to create new languages. The software comes with English and Italian LNG language files, found in the software setup folder. To edit your default language, just select your favourite one from the available languages in the drop-down box.

- **Database path**

Sets the path to the centralized database which is going to retain all the informations about logged segments, scheduling, etc. Except for specific requirements, we suggest to leave the default settings.

- **Log File**

Sets a filename with full path where Lapsejay will write its operation log (for example timestamp of recording start and end, software startup and shutdown, etc.). This is a plain text file, which you can open with Windows Notepad.

Password section

Optionally, you may set a password to limit access to the setup window only to authorized personnel. You will be requested to type this same password whenever you press the “Rec” and “Stop” buttons on the main recording window.

- **Old password**

To edit the current password, type the old password in this box. If the password is the right one, the icon changes into and you will be allowed to type the new password into the other. Otherwise, you will not be allowed to make changes. The default password set on the system is “winjay”, without quotes. With this default settings, access is granted to everybody and no password request is performed.

- **New password**

Once you typed the old password in the first box, just type here the new password to set.

Layout section

As already descripted, Lapsejay main recording window layout can be freely user-set depending on the available channels and/or your specific requirements.

- **Index panels**

Sets the number of synthesis panels (from 0 to 2), each of them contains 4 mini-screen related to as many logging channels.

- **Detail panels**

Sets the number of detail panels (from 0 to 2), each of them show details related to as many logging channels.

Alarm section

- **Alarm mode**

Sets the alarm mode when a loss or frozen incoming signal is detected:

1. Disabled: no action will be undertaken.
2. LPT: the bit on the parallel port corresponding to the blank channel will be triggered. This is a TTL signal available on the parallel port determined by the user settings. Channel 1 triggers pin 2, Channel 2 triggers pin 3, Channel 3 triggers pin 4, Channel 4 triggers pin5. Common ground is pin 18.
3. SMS: Lapsejay will send an SMS to the specified numbers.
4. LPT + SMS: both actions will be undertaken.

- **Box Phone COM port**

If you wish the blank detector warns your tech personnel via SMS, here you'll have to specify the COM port where your phone is connected. Lapsejay currently supports the following Nokia phones: 3210, 3310, 3330, 3390, 3350, 3410, 3510, 5110, 5130, 5190, 5210, 6110, 6130, 6150, 6190, 6210, 6250, 6310, 6310i, 6360, 6510, 7110, 7190, 8210, 8290, 8250, 8310, 8390, 8810, 8850, 8855, 8890, 8910.

- **Interface type**

Allows to select the interface type used to connect the phone.

- **LPT address**

If you wish the blank detector triggers an external device via the parallel port, just type the hex addess of the parallel port used for this purpose. For example, $378 for the LPT1, $278 for the LPT2.

- **Alarm SMS numbers**

If you have set Lapsejay to alert your tech personnel via SMS in case of blank, just add their SMS numbers in this box. More than one number may be added, separated by a semicolon, for example: 3391234546;348123456

Skin selection

Graphic layout of Lapsejay is based on "**skins"**: these are packages of graphics components which are used to customize software appearance, from dialog windows to buttons, menus, labels, etc. Thanks to skins, the user interface can be made good looking according to your own taste. Lapsejay includes a folder with several "skins": click on the button to the right of the edit box and browse your skin folder to select your favourite one. Some examples of skins:

Audio monitoring section

- **Enable audio monitoring audio**

If checked, enables audio monitoring feature. The sampled audio from the capture card will be rendered on the PC's sound card.

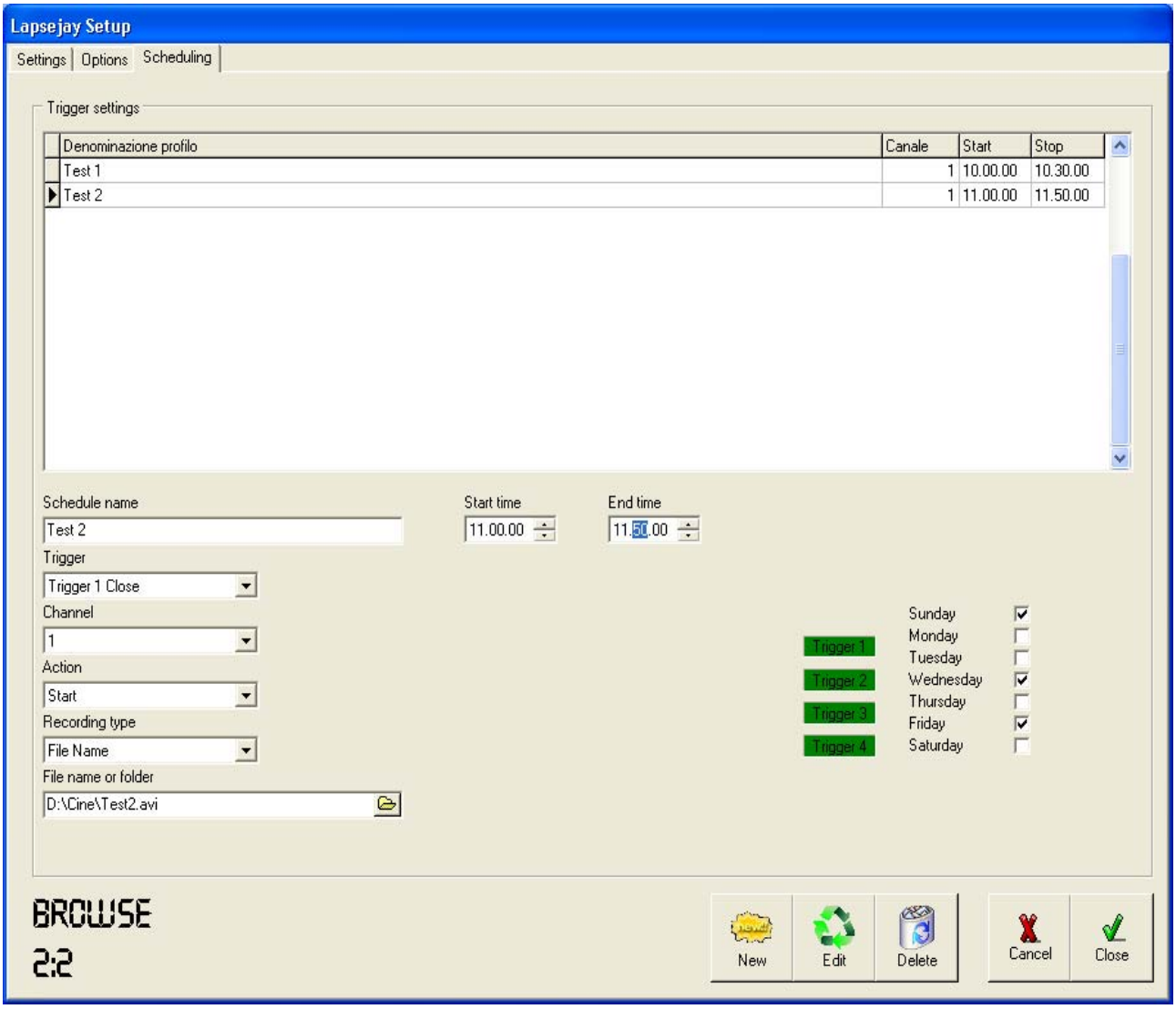
- **Audio monitoring volume**

Sets audio monitoring output volume.

- **Audio device**

Sets the sound card to use for the audio monitor output.

Press the “schedule” tab to enter the scheduling page, which allows to schedule recordings according to time and day of the week, or via external triggering.



Quickstart (scheduling a clock driven recording):
In the following example we're going to schedule a recording each Monday, Wednesday and Friday, starting at 10.00.00 AM up to 10.30.00 AM. Each time, the existing file (if any) will be overwritten by the new recording.

1. Press the "New" button to switch the database to insert mode.
2. Insert a name for your new scheduling, set 10.00.00 as start time and 10.30.00 as ending time, then check the Mon, Wed and Fry boxes.
3. In the "trigger" box, select the "clock driven" item to schedule your recording according to your start and ending time.
4. In the "channel" box, select the channel where you want to schedule your recording, for example channel number 1.
5. The "action" box will have no effect, since it is only used to associte an action to a trigger. In the "recording mode" box, select the "file name" item, browse your Hard Disk to set your storage folder, then type the file name which will be used for your recording.
6. Finally, press the OK button to confirm when done.

Quickstart (scheduling a triggered recording):
In the following example we're going to schedule a recording each Tuesday and Thursday, starting will be triggered by the closure of Trigger 1 but only between 10.00.00 AM up to 10.05.00 AM. This time, files will be named each with its own timestamp according to the recording start time, and put in the specified folder. To stop recording according to another trigger, you'll just have to add a similar scheduling.

1. Press the "New" button to switch the database to insert mode.
2. Insert a name for your new scheduling, set 10.00.00 as start time and 10.05.00 as ending time, then check the Tue and Thu boxes.
3. In the "trigger" box, select the "Trigger 1 close" item.
4. In the "channel" box, select the channel where you want to schedule your recording, for example channel number 1.
5. In the "action" box, select the "start" item. In the "recording mode" box, select the "folder name" item, then browse your Hard Disk to set your storage folder.
6. Finally, press the OK button to confirm when done.

Detailed description

- **Schedules grid**

Contains the list of schedules in the database. You can navigate the list with the arrows on the right. Left-clicking on each item on the grid, related details are shown in the corresponding controls below in the window.

- **Schedule name box**

Contains a name for the current schedule, for faster recalling. For example, “morning news”.

- **Trigger box**

Sets the trigger which will activate the current schedule. For example: “Trigger 1 Close” will activate the schedule when trigger 1 closes, “Trigger 2 Open” will do the same when trigger 2 opens, and so on. Setting the “clock driven” item, recording will start and stop according to scheduled start and stop time, triggers will be ignored.

- **Channel box**

Sets the channel (from channel 1 to channel 4, depending on your purchase) where you want to schedule your recording.

- **Action box**

Sets the action which a trigger will undertake:

1. Start: recording will start with the previously loaded profile.
2. Stop: recording will stop.
3. Load Profile: Logjay will load the specified recording profile and start recording.

If the current schedule is clock drive, this setting is ignored.

- **Recording mode**

Two recording modes are available:

1. Date/time: files with the logged audio will be named according to recording start date and time: this mode should be used for long-time logging purposes, since each recording will be assigned a different file.
2. Specify file name: the audio file will be always named the same way, according to your settings. Each new recording will overwrite the previous ones, which will be lost, of course.

- **Storage folder / filename**

If recording mode has been set on date/time, just click on the icon and browse your hard disk to select the folder (local or LAN) where the logged audio will be stored.
Otherwise, if recording mode has been set on a specific file name, this box will allow browsing for your desired path and file name which will be overwritten for each new recording.

- **Start time**

If the current schedule is “clock driven” type, you’ll have to type here the start time of your recording. Otherwise, when external triggering is used, the start time is considered as trigger enable start time, meaning that the trigger event is taken into account only if between the start and end time specified. This way, you may restrict your recording just to your desired schedule, ignoring unwanted triggering.

- **End time**

As above, this is the end time for your recording in the case of “clock driver” events, or trigger enable end time when external triggering is used.

- **Days enabled**

This group of checkboxes from Sunday to Saturday allow to enable the current schedule for each day of the week. This way, you may also add totally different schedules for each day of the week.

- **New button**

Switches the database to insert mode to add a new schedule.

- **Edit button**

Switches the database to edit mode, to edit settings for the current schedule.

- **Cancel button**

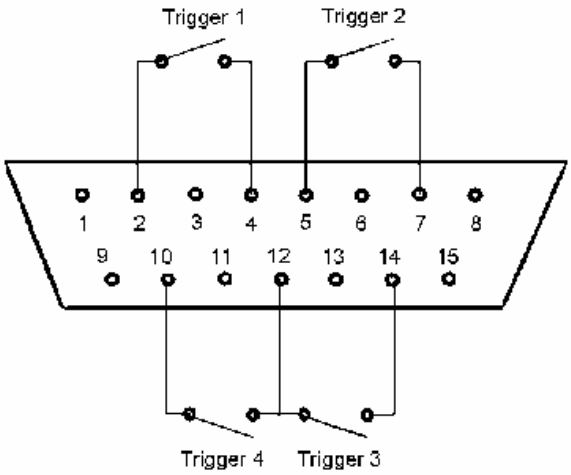
Deletes the current scheduling. You’ll see a dialog box asking for confirmation.

- **Cancel button**

Cancels updates and switches to browse mode. You'll see a dialog box asking for confirmation.

- **OK button**

Confirms updates and switches to browse mode. If the database is already in browse mode, closes the setup window.



For the trigger feature to work correctly, first of all you should connect to the joystick port using the diagram on the left (for the preliminary checks you may also wish to use an ordinary joystick). You also have to add some 100 K-Ohm resistors between pins 1-3, 1-6, 9-11, 9-13: otherwise Window will report the joystick as "not connected" and triggers won't work. You should also jump together pin 12 with pin 4 (or 5).

In order to complete your setup, you should install joystick drivers:

- From Windows control panel, double click on the "joysticks" icon.
- For Windows2000/XP, click on "Add", select "2 Joysticks 2-axys 2-buttons on the same port", then click "OK".
- In the "Joysticks" window you should now see the list of the ones you've just added. If everything is working fine, in the "Status" column you should see "OK".

Chapter 2: The player module

Segments with the logged video will be found on your storage folders timestamped with recording start time, as yyyymmdd-hhmmss.avi – that way it will be easy to trace your desired segment. However, whenever you need to play the logged video, running the Lapsejay player will easy the task of locating the desired passage. Lapsejay includes a free licence of Lapsejay Player Basic, which runs on the same PC as Lapsejay recording module as well as any workstation in your LAN, without any added cost.

Lapsejay Player Basic main window:

By purchasing a licence for Lapsejay VX Player Pro, new features will be added, such as dual player (to monitor two channels at once), DVD burning, and video export/reencoding features.

Lapsejay Player Pro main window:

Quickstart (playing the logged video):

1. Using the drop-down boxes, select the channel, date and time from which you wish to start playing the logged video.

2. Press the Play button to start playing.
3. In play mode, the time display shows in real time the timestamp of the logged video, and the slider the relative position in the audio file containing the desired segment. Click and drag the slider to move back and forward.

- **Frew button**

In play mode, switches to fast rew seek mode.

- **Rew button**

In play mode, switches to rew seek mode.

- **Play button**

Starts playing the desidered logged segment according to selected channel and date/time.

- **Pause button**

In play mode, switches to pause mode.

- **Stop button**

Stops playing the logged audio.

- **Fwd button**

In play mode, switches to forward seek mode.

- **FFwd button**

In play mode, switches to fast forward seek mode.

- **Sync players button**

Sometimes you may wish to play simultaneously recordings from 2 different channels (for example, in order to compare your schedule and your competitors). Once the first player is started and running, select the channel, date and time on the 2nd player and then click on this button: the 2nd player will start playing the selected channel and keep in synch with the first one.

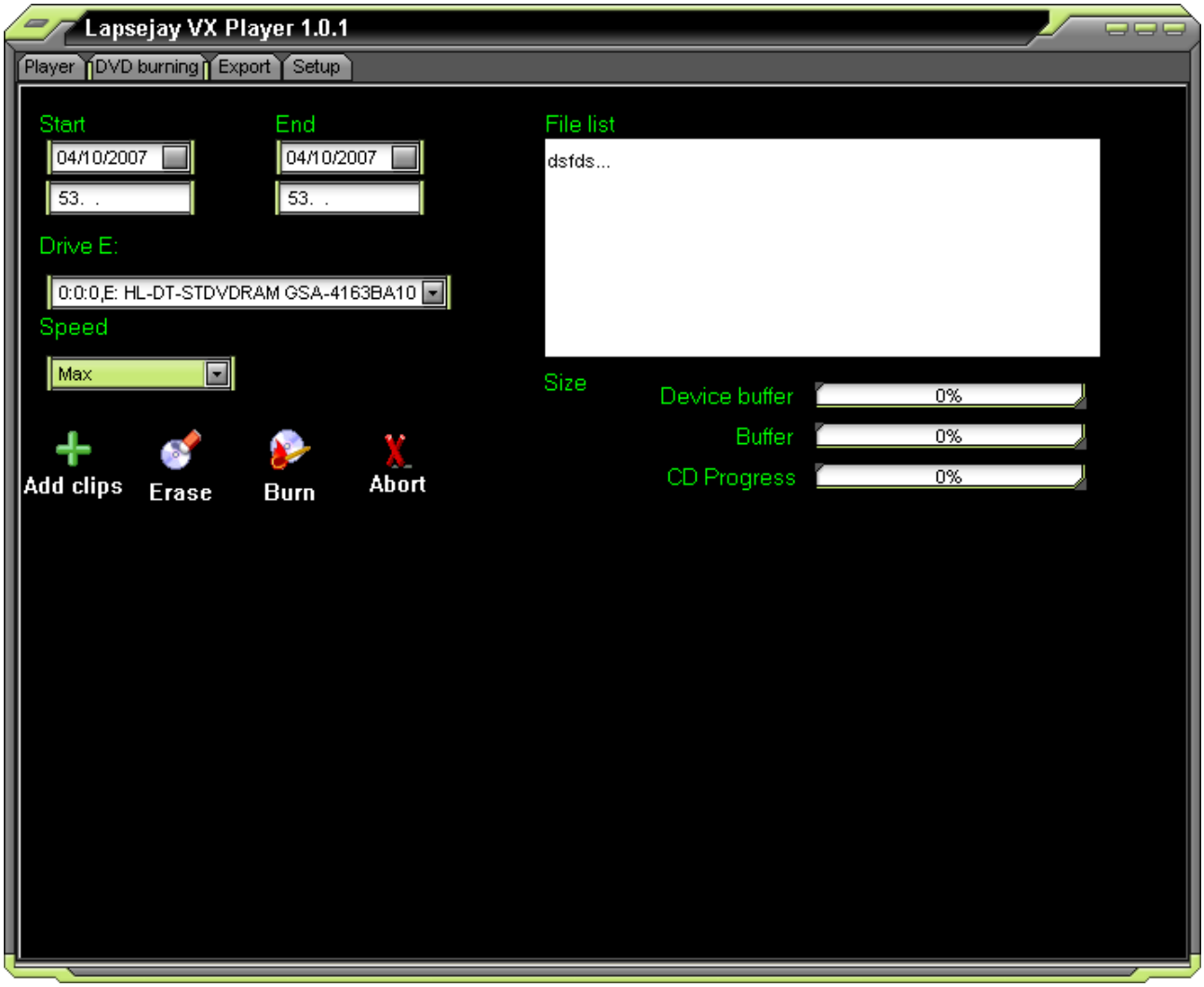
- **Audio monitoring**

When using both players at once on the same soundcard, you may wish to separately enable or disable audio output for each player:

Disables audio output for the corresponding player.

Enables audio output for the corresponding player.

Click on the “DVD burning” tab to enter the related page, which allows to burn DVDs with your recorded files:



- **Start - end date/time**

These controls allow to filter your recordings database according to start and end date/time interval, for example you may wish to select only recordings from 02/10/2007 10.00.00 to 05/10/2007 12.00.00

- **Add clips button**

Once you have set your date/time interval, click the “Add clips” button to add selected clips into the filelist for burning your DVD.

- **Drive setting**

Sets the DVD drive to use for burning your DVD.

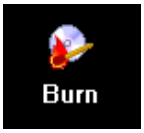
- **Speed setting**

Sets the speed for burning your DVD

- **Erase button**

Click on this button if you wish to erase your DVD-RW before burning

- **Burn button**

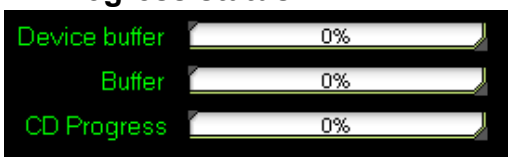


Click on this button to start burning your DVD when everything has been set.

- **Abort button**

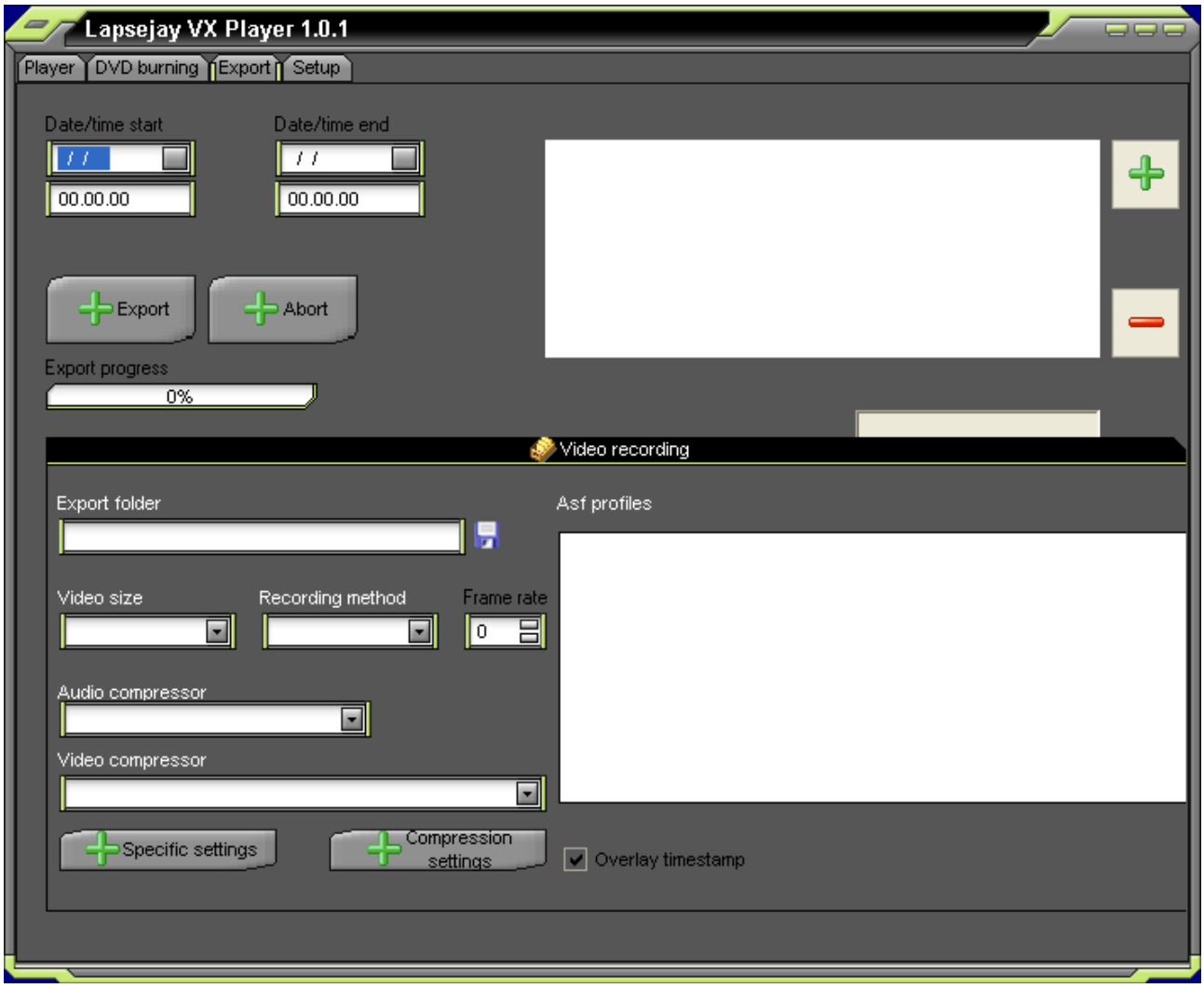
Click on this button should you wish to abort the DVD burning process.

- **Progress status**



While the DVD burning is progressing, these bars will be updated with the buffer status and DVD burning progress.

Click on the “Export” tab to enter the related page, which allows to convert your recorded files to another video format:



- **Start - end date/time**

These controls allow to filter your recordings database according to start and end date/time interval, for example you may wish to select only recordings from 02/10/2007 10.00.00 to 05/10/2007 12.00.00

- **Add clips button**

Click on this button to add clips between the start/end date and time set above.

- **Export button**

Click on this button to start exporting selected recordings when everything has been set.

- **Abort button**

Click on this button should you wish to abort a running exporting process.

- **Export folder**

Sets the folder where re-encoded clips will be stored.

- **Video size**

Sets the target video size for re-encoded clips.

- **Video format**

Sets re-encoding format, AVI (using the audio/video codec set in the related boxes) or or ASF (using the recording profile set in the related bix “ASF settings”).

- **Frames per second**

Sets the frame rate to use for re-encoding.

- **Audio format**

Allows to set the audio sampling frequency / bits to use for audio capture, for example 8000 Hz 16 Bit.

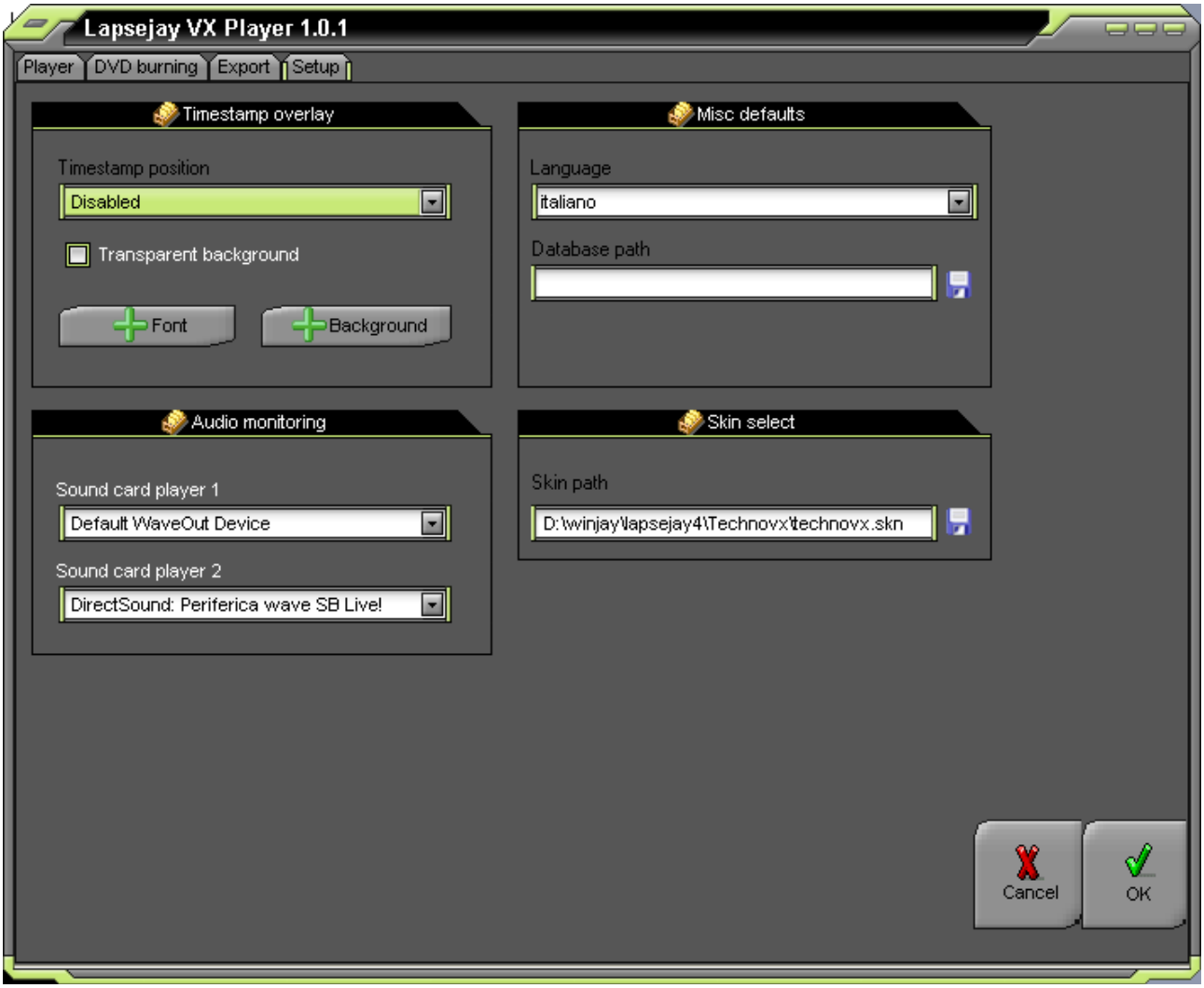
- **Audio compressor**

Allows to set audio codec for audio compression. Click the button on the right of the box, select your desired codec, and press OK to continue.
In order to get the best quality/compression ratio, we suggest to use the Windows Media Audio codec, just be careful not to use 8 bit formats, which are not supported.

- **Video compression**

Sets the codec to use for video compression, for example xVid or DivX. The button below allows to manage the codec specific settings (bitrate, etc.).

Click on the “Setup” tab to enter the setup page, which allows to set the various player’s options.



- **Timestamp position**

Should your clips have been recorded without any timestamp overlay, Lapsejay Player allows to automatically perform a realtime timestamp overlay to the played video while watching. This box allows to set the timestamp position on the video window. If you wish to disable this feature, select the “disabled” option.

- **Transparent background checkbox**

If checked, the timestamp is overlayed without any background. Otherwise, the colour set with the “background color” button will be used.

- **Font button**

Opens the font settings window, to set font, color and font size for timestamp overlay.

- **Background color button**

Opens a dialog window to set the color to use for the timestamp background.

- **Soundcard player 1**

Sets the sound card to use for the player audio output.

- **Soundcard player 2**

Sets the sound card to use for the player audio output.

- **Language**

Lapsejay is multilinguage and any caption used in the software is read from a text file you can easily tailor to your needs, or copy-and-paste to create new languages. The software comes with English and Italian LNG language files, found in the software setup folder. To edit your default language, just select your favourite one from the available languages in the drop-down box.

- **Database path**

Sets the database path where each player module should read search for informations concerning the logged video. If the player module runs on the same workstation as the recording module, just leave the default setting, otherwise please specify the path to the database on the recording workstation (for example \\logger\c\program files\lapsejay).

- **Skin select**

Click on the button to the right of the edit box and browse your skin folder to select your favourite skin.

- **Cancel button**

Cancels changes and closes the setup window.

- **OK button**

Confirms changes and closes the setup window.

Choosing the audio/video codec

It would be quite far from feasible building a long-time logging system without using any form of audio/video compression: the space needed to store a few days of recordings will overcome the space available on the biggest Hard Disk now on the market. Luckily, on the Windows platform a quite large number of audio/video codecs (codec = coder-decoder) are available to compress and uncompress audio/video data in real time, minimizing hard disk space needed for data storage while maintaining at the same time a quite fine quality. Lapsejay can handle most of Windows preinstalled codecs, or other ones which can be user installed later: so, you may set recording quality according to desired quality and available disk space. To summarize, in the following table we have computed the hard disk space needed for logging 30 days, depending on the frame rate and video size. Values have been obtained with DivX5 video codec, and Windows Media Audio V2 audio codec set at 8000 Hz, 16 bit. Please note that values are approximate, since actual video bitrate depends on the incoming video signal characteristics.

Video size	Frames per second	Hard Disk space for 30 giorni	Video bitrate in kBit/s
320 x 240	25 (full motion)	~ 250 Gbytes	codec DivX 5.05 set to 600 Kbps (VHS quality)
320 x 240	15	~ 85 Gbytes	codec DivX 5.05 set to 256 Kbps
320 x 240	10	~ 50 Gbytes	codec DivX 5.05 set to 192 Kbps
320 x 240	5	~ 40 GBytes	codec DivX 5.05 set to 64 Kbps

As you may notice, the storage requirements vary depending on the video size and frames per second, though not necessarily in a proportional way.

With a low video size, image will tend to appear pixelized, especially if resized to full screen; on the other hand, with a bigger video size, the overall image resolution will surely improve, though a greater video bitrate is required. With low frame rates, the video will play by steps, while values of 15 fps or higher will return smooth recordings.

Obviously it is possibile to record in higher quality, but of corse the Hard Disk space requirements will be higher. The final choice is up to the final user, according to his own requirements vs. available storage space.

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